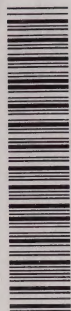


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DEPARTMENT OF LABOUR, CANADA
H. King - - - - Acting Minister of Labour

COMBINES INVESTIGATION ACT, 1923

INQUIRY INTO ALLEGED COMBINE

IN THE

FACTURE AND SALE OF BREAD

IN THE

CITY OF MONTREAL

REPORT OF REGISTRAR

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Hon. J. H. King - - - - Acting Minister of Labour

COMBINES INVESTIGATION ACT, 1923

INQUIRY INTO ALLEGED COMBINE

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MANUFACTURE AND SALE OF BREAD

IN THE

CITY OF MONTREAL

REPORT OF REGISTRAR

March 25, 1926

Ottawa, March 25, 1926

The Honourable J. H. King, M.D., M.P.,
Acting Minister of Labour,
Ottawa

Sir:

An inquiry on the subject of an alleged combine in the manufacture and sale of bread in the City of Montreal has been made under the Combines Investigation Act, 1923, following an application for investigation signed, as required by the Act, by "six persons, British subjects, resident in Canada, of the full age of twenty-one years". The applicants declared themselves to be of opinion that a combine existed in Montreal "having the effect of creating a monopoly, the purpose of which is to prevent legitimate competition between the various bakers, and to prevent Montreal distributors and grocers from selling bread at a reduced price, to the detriment of or against the interest of consumers and particularly of workers".

Additional allegations were made following the receipt of the formal application, the substance of the whole complaint being as follows:

That a combine or association of bakers exists in Montreal, operating to the detriment of the public, and having the effect of

(1) Eliminating competition and creating a monopoly;

(2) Fixing uniform prices, wholesale and retail, to be observed by all the Montreal bakers and grocers;

(3) Maintaining these uniform prices by the following means:

(a) Withholding flour from bakers selling below the fixed wholesale or retail prices,

(b) Withholding bread from grocers selling below the fixed retail price.

The procedure followed under the Combines Investigation Act is to ascertain, by means of an informal inquiry on the part of the Registrar, whether the facts are such as to justify a more exhaustive and formal investigation, possibly by a commissioner especially appointed for the purpose. The present report is based on the results of such an inquiry, which has been carried on with the very helpful assistance of Mr. E. McG. Quirk, special representative of the Department of Labour in Montreal. Information has been secured through questionnaires addressed to all the bakers of Montreal, and through personal interviews and correspondence with many of them and with representatives of the milling companies and many others in a position to know the situation. Statements have been obtained from each baker, covering, for the period of one month, total output, detailed and total costs, wholesale and retail prices, wages and hours of employees, and, in a number of cases, the relative quantities of the different ingredients used.

The Montreal City Council, in October last, appointed a committee of aldermen, under the chairmanship of Alderman Leon Trepanier, to make inquiries into an alleged attempt at monopoly of the bread trade of the city. Several public hearings were held, and in February the Committee published an interim report, the effect of which is contained in the following quotations:

"After hearing the evidence adduced, we have come to the conclusion that the agitation which has cropped up is due to an intestine war among a certain group of small bakers of Montreal, but it has been impossible for us to obtain any accurate information as to the existence of a combine between bakers or as to the pressure which might have been brought to bear upon bakers generally by certain big interested parties for the purpose of fixing a minimum price for bread. Apart from the evidence we heard, we deemed it advisable to gather extracts from newspapers showing the price of bread in foreign countries, and we must infer from this incomplete study that, in Canada and therefore in Montreal, the price of this foodstuff, which is indispensable for the sustenance of the population, is too high, in view of the fact that we are a wheat-producing country and that bread should, therefore, logically cost less than in the countries where the producer has to import the raw material.

"Your Committee . . . cannot say, from the information it has received, whether or not there exists a combine for the purpose of fixing a minimum price for bread in Montreal."

The points thus raised by the Committee have been borne in mind in the inquiry under the Combines Investigation Act and in the preparation of this report.

I

At the present time Montreal has 146 licensed bread bakeries, commonly regarded as coming within the following four groups: French, 102; English, 13; Jewish, 22; Italian or Greek, 9. The total number has not changed greatly during recent years, as is indicated by the following official record secured from the civic authorities: 1922-23, 148; 1923-24, 155; 1924-25, 147; 1925-26, 146. During the year 1925-26, 24 bakers have dropped out, but 25 others have started in business. In each of the earlier three years, the number of changes has been about the same. Only 100 of the 146 bakers have been continuously in business during the full four years: French, 70; English, 13; Jewish, 14; Italian or Greek, 3.

The bakeries vary in size all the way from the single-oven establishment, producing a few hundred pounds a month, to the gigantic modern plant with an output of a million pounds and more a month. There are five plants producing more than half a million pounds of bread monthly; nine producing between 100,000 and 500,000 pounds; 78 producing between 10,000 and 100,000; and the balance, fifty or more, with output of less than 10,000 pounds a month.

II

The present survey has shown that, while there has been no question as to the fact of certain recent advances in prices of bread in Montreal, there has been uncertainty in the minds of the applicants and of the public as to the group or groups of bakers who have increased their prices or who have been responsible for the advances, and also as to the occasion or necessity for any increase.

Public attention naturally turned to the recent merger of three of the largest English bakeries in Montreal. In April the merger was announced; in September came an increase in bread prices (not, as it turned out, in the prices charged by these companies). Naturally, many assumed that the merger was responsible. On the other hand, to those more closely in touch with the situation, it was clear that the advance was made, not by all the bakers in the city, but by practically all outside of the English group.

The immediate cause of this advance in prices was an attempt on the part of a number of the bakers in the non-English groups to put an end to a price-war which has waged among them intermittently for years, and to establish a uniform price (10¢ wholesale, 11¢ retail) for a $1\frac{1}{2}$ lb. loaf. Most of them had been selling bread at extremely low prices - some below cost, even as low as 7¢ retail for the $1\frac{1}{2}$ lb. loaf, others as high as 11¢ retail, or the same as the lowest price of the English bakers, the largest of whom were selling at that time, and had been selling since the summer of 1924, at $12\frac{1}{2}$ ¢ a loaf, a price which was reduced to 12¢ in November. In the autumn of last year, several meetings were held, at which an effort was made to agree upon a retail price of 11¢ a loaf. Prices subsequently advanced to 10¢ wholesale and 11¢ retail, but before the month was out it was evident that the understanding reached was only another temporary cessation of hostilities.

Inquiry has been made as to whether, at these or subsequent meetings, any agreement was reached to have flour withheld from bakers, or bread from grocers, who sold below the fixed prices. In the opinion of the undersigned, there was no such agreement. Certainly there was no withholding of supplies on this account. For one thing, the co-operation of the flour milling companies would have been necessary in order to cut off flour supplies, and this co-operation was not secured. As far as the grocers are concerned, no instance has been reported or found of supplies of bread having been withheld.

The September attempt to end the price-war was but one of a long series of efforts (none of them effective for more than a few weeks) which the trade has experienced in recent years. In 1919, for instance, complaint was made to the Board of Commerce that the French bakers of Montreal had made an agreement fixing a uniform price. The agreement was admitted by the bakers, who had deposited signed notes guaranteeing their maintenance of the agreed price. In this case, the Board found that the resulting enhancement of prices was not unreasonable or to the detriment of the public.

Since September last renewed efforts have been made, but, although understandings have been reached, the bakers have found it impossible to maintain anything like stability of prices, or to prevent selling below cost.

It is the latter practice of selling below cost which gives any measure of justification there may be to the efforts which have been made to come to an understanding. Instability of prices, when costs are reasonably stable, may be undesirable, but in the bread business "below-cost" prices for any length of time are certain to be disastrous to the baker himself, against the interests of his employees, unfair to competitors, and, in the end, of no advantage to the consumer. A few consumers, for the time being, may get "something for nothing", but ultimately it must be at somebody's expense. It is common knowledge, for instance, among those in touch with the bread business that selling at cost or less than cost is a practice likely to lead to "short weight" in order to make ends meet. Other devices are just as undesirable and are likely to involve inferior quality, disregard for sanitary conditions, lower wages and longer hours for employees, increased risk in doing business, and, finally, bankruptcy if the practice is long continued. In the end the public pays the bankruptcy bill. The public has to meet in part also the losses occasioned by the numerous changes already noted, many of them due to financial difficulties of bakers who have been selling without regard to their costs. Most of the bakers, of course, survive, but the losses they have sustained have to be made up in times of peace, and in the long run the community stands to lose rather than to gain by the experience.

In view of the situation thus described, and in the light of the analysis which has been made of costs and prices, I am of the opinion that among the bakers in the non-English groups there has been no combine or agreement which has operated to the detriment of or against the interest of the public.

III

As far as the recent merger in Montreal is concerned, inquiry into the records of the three constituent companies has disclosed that practically the only change in their prices since the summer of 1924 occurred in November last, when the retail price was reduced from $12\frac{1}{2}\text{¢}$ to 12¢ for the $1\frac{1}{2}$ lb. loaf; wholesale prices were reduced at the same time from $11\frac{1}{2}\text{¢}$ to 11¢ . There is no ground, therefore,

for complaint against the merger on the point of enhancement of prices: There has been no enhancement of prices, unreasonable or otherwise.

Nor has evidence been discovered that would place on the merger responsibility for the temporary advances in the prices of the bakers in the other groups. It is beyond question that the practice of selling below cost has meant serious losses of business to those companies, as to every other Montreal bakery, and that it is in the interests of the business generally to discourage such unfair competition. I am satisfied, however, that the merger has taken no unjustifiable action in attempting to meet this situation. In certain districts where competitors have sold far below cost, they have sold a second-quality loaf, also below cost, in an effort to hold customers. In every instance of this kind inquired into, it has been admitted by the competing bakers chiefly concerned that they, and not the merger, were responsible for the course taken. It seems clear, therefore, that this action has been taken in self-defence and not with the object of eliminating competition in order to establish a monopoly. As a matter of fact, the bread output of the three companies in the merger is not as great today as it was prior to the amalgamation. In any event, the fact that there are 146 licensed bakers in Montreal at the present time, practically all of them independent, owning their own plants, most of them unwilling apparently to co-operate effectively, the majority producing more than 10,000 pounds a month, should be sufficient to assure the Montreal public of all the competition necessary in its own interest.

As a matter of fact, monopoly in the manufacture of bread is all but inconceivable. The art of bread-making in the home has not yet been lost beyond recovery. Even more potent protection lies in the small-scale bakery, and the facility with which new plants of small capacity can be established - it is amazing how new and fairly large establishments have sprung up almost overnight in Montreal. There is not much likelihood of Government intervention being needed; any attempt at monopoly would soon be overcome within the industry itself.

The governmental inquiries which are being made at the present time in the United States into certain large baking interests, including the corporation of which the three Montreal companies are subsidiaries, are being followed with close interest. Up to the present time, however, the facts disclosed in the United States investigation have not had any direct bearing upon the issues involved in the Montreal inquiry.

Rumours have been widespread within the past year to the effect that a "bread trust" was on the point of acquiring the majority of the important bakeries of Montreal. Careful inquiry has shown that there is no ground whatever for these rumours - that, so far as Montreal is concerned, three companies, and three only, are parties to the merger, and that 143 Montreal bakeries are operating independently of the new consolidation. In the opinion of the undersigned, there is nothing menacing to the public welfare in the amalgamation of three of the existing baking companies, even though they are the largest, and even though they are financially controlled by an international corporation. In the event of developments likely to operate against the public interest, there is within reach of the public, in the Combines Investigation Act, ample power to ensure appropriate and effective action.

IV

The object of the inquiry under the Combines Investigation Act has been to ascertain whether or not any agreement or combine has been operating to the detriment of the public. No such combine has been disclosed, but in coming to an understanding of the situation many facts and figures concerning the industry have been assembled which it is thought may be of public interest and of public value. Accordingly, they are embodied in the following concluding sections of this report.

One of the difficulties in making a study of the Montreal bread situation is this, that the majority of the bakers, particularly the smaller ones, actually do not know what their costs are. That is one reason why prices in some instances have been abnormally low. Fairly accurate account is taken, of course, of the cost of flour and other ingredients, and some of the more obvious other expenditures are more or less accurately recorded, but instance after instance has been disclosed where no provision, or utterly inadequate provision, is made for costs as inevitable as taxes, rents, depreciation of plant or equipment, replacements, fuel, power and lighting, insurance, bad debts, interest on capital invested. In more than one instance, it was found that where the members of the baker's family were engaged in the industry no charge for such labour costs was included in the expense sheet; that where the baker himself drove the waggon no charge was made for delivery. Many of the amounts included as overhead and other expenses have been obviously guesses, and these returns,

therefore, have had to be disregarded in arriving at average costs and average prices.

As far as the records of the Jewish, Greek and Italian groups are concerned, it has been impossible to make any satisfactory generalization; the returns are hopelessly inadequate. Eliminating from the French and English groups all returns which are obviously made from inaccurate or incomplete records, there remain 39 in the first group and 11 in the second, representing all sizes of bakeries, whose records should properly be included in any compilation. An analysis of them shows that during one month (September, 1925) the bread produced by the French group cost 9.60¢ per $1\frac{1}{2}$ lb. loaf and sold for 10.15¢ per loaf, leaving an average profit of slightly over half-a-cent a loaf. The average cost of the flour used during the month was \$8.02 per 196 lb. barrel. During the same month, the bread produced by the English group cost 12.03¢ per $1\frac{1}{2}$ lb. loaf and sold for 12.10¢ a loaf, leaving an average profit of .07¢ a loaf. The average cost of the flour used by this group was \$7.80⁽¹⁾.

The following further analysis shows how the different items of expense entered into the cost of a loaf of bread in September. The average wholesale and retail receipts cannot be given separately as many of the bakers, even the largest of them, keep no separate records of their wholesale and retail distribution.

Comparative figures are given also for the month of November, 1919, when complaint was made to the Board of Commerce concerning bread prices in Montreal. Records of 1919 prices on the same basis are not available, but, as far as they go, it is clear that the margin between costs and prices was close, certainly within a half-a-cent a loaf.

(1) It is interesting to note that the price of First Patent Flour in September, 1925, in carlots, at Montreal, was \$8.50 per 196 lb. barrel; Second Patent at \$8.00; according to the records of the Bureau of Statistics. The listed prices for First Patents for the earlier months of the year (when most of the flour was contracted for) are as follows: January \$10.60, February \$10.70, March \$10.20, April \$8.95, May \$9.80, June \$10.02, July \$9.10, August \$9.27; prices for Second Patents were 50¢ lower in each case.

Analysis of Costs and Prices of Bread in Montreal

<u>Per 1½ lb. loaf</u>	<u>September, 1925</u>		<u>November, 1919</u>	
	<u>French</u>	<u>English</u>	<u>French</u>	<u>English</u>
	<u>group</u>	<u>group</u>	<u>group</u>	<u>group</u>
	<u>(39 bakers)</u>	<u>(11 bakers)</u>		
	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>
Flour	4.82	4.19	6.68	6.30
Other ingredients	.88	.87	.72	1.05
Baking and wrapping	1.02	1.91	.96	1.21
Delivery and sale	1.76	4.00	1.74	2.31
Overhead expenses	<u>1.12</u>	<u>1.06</u>	<u>.78</u>	<u>1.47</u>
Average cost per loaf	9.60	12.03	10.88	12.34
Average selling price				
per loaf (including				
wholesale and retail)	10.15	12.10		
Average margin per loaf	.55	.07		
Average no. of loaves				
per 196 lb. bbl. of				
flour	1.67	1.89		
Average cost of flour				
per bbl.	\$8.02	\$7.80	\$11.08	\$10.83

The comparison between 1919 and 1925 shows that, while there has been a substantial decrease in flour costs, other expenses have increased, notably, wrapping (there was practically no wrapping of bread in 1919, this having been more or less discontinued during the war) and delivery and sale. For the exceptional advance in distribution costs, a comparatively small number of the bakers in the English group are chiefly responsible. If, therefore, certain bakers regard the margin between costs and prices as too slight, it would appear that they should look to the lowering of their distribution costs, rather than to the raising of their prices to the consumer, for the remedy.

It is clear also from the above table that prices of bread are not uniform, and have not been uniform, as between the two principal groups. Still greater variations in price would be observed if the records of the Jewish and Italian and Greek groups were complete enough to be included in the analysis. Uniformity in price is, of course, not desirable where, as among the bakers of Montreal, there is not corresponding uniformity in costs of production and distribution. Where costs are not uniform, uniformity of prices means too wide a margin for one baker and too narrow a margin, or none at all, or often a margin the wrong way, for another.

V

And costs are not the same, even as between bakers within the respective groups. Some of the reasons for these variations have been suggested in the foregoing, but they may be summarized as follows:

Flour and Other Ingredients

The flour used by Montreal bakers in September, 1925, ranged in price from \$7.00 a barrel to \$9.45. The Dominion Bureau of Statistics figure for the month for Second Patents (which is the grade of flour principally used by the bakers) was \$8.00. It is evident, therefore, that the "average" price cannot be relied upon in estimating any individual baker's costs. Any baker would no doubt feel himself entitled to estimate his flour costs on a cost of replacement basis.

Montreal bakers average about 180 pound-and-a-half loaves of bread from a barrel of flour, some less, some more. A reduction, therefore, of \$1.80 in a barrel of flour would lower the baker's flour costs by one cent a loaf.

Differences in quality of flour account in part for the price variations.

The time at which the contract is made, and the length of the contract, are other factors.

Quantity buying gives an advantage to the large bakeries, many of whom contract for hundreds or even thousands of barrels a month. In many instances, however, smaller bakers have secured prices as favourable as their larger competitors, through contracting or buying at opportune times.

The control of a bakery by a flour milling company - there is at least one instance of this in Montreal - gives it an apparent advantage in securing favourable prices. There may be further developments in this direction in the industry in Canada, either large mills owning bread bakeries, or large bakeries operating their own flour mills.

Ingredients other than the basic flour, yeast and salt are varied in quantity and quality. The formulae secured show wide differences in the extent to which use is made of sugar, malt, shortening, milk or milk powder, arkady or yeast food.

The quantity of yeast varies considerably, approximately three times as much being used in making bread on a quick method formula as compared with the "long dough" method.

Baking

The yield of bread per barrel of flour, and consequently the cost of flour per loaf, varies greatly as between different bakers. According to their own records, some of the bakers are securing only 160 loaves from a barrel; others as many as 193 loaves.

Through bad mixing or underbaking, a baker can leave a disproportionate amount of moisture in every loaf; as much as 2 ounces in a loaf can be gained in this way.

Certain bakers make what is known as a "dry bread", which requires not less than 29 ounces of dough for a 24-ounce loaf, as compared with 27 ounces of dough for the ordinary bread.

A number of instances of short weight have been reported. Checking of weights (as well as inspection of premises) has been carried on by the Food Inspection Division of the City, but apparently without sufficient staff. The Merchants' Association of Montreal made independent inquiries and found that the price-war was responsible for much of the shortage in weight. It is of interest in this connection to observe that, in the present inquiry, out of seven loaves secured from as many bakers in December and submitted to the Chief Analyst of the Dominion Department of Health for analysis, only two came up to the full weight of 24 ounces when weighed the day after baking. The weights of the loaves were as follows: 20 $\frac{3}{8}$ ozs., 22 $\frac{1}{8}$ ozs., 22 $\frac{1}{4}$ ozs., 22 $\frac{1}{4}$ ozs., 23 $\frac{5}{8}$ ozs., 24 $\frac{1}{8}$ ozs., 25 ozs. The details of the analysis are recorded on page 14 of this report.

In its interim report, the Committee of the Montreal City Council concludes with the statement that it will consider further "the suggestions which the Chief Food Inspector and the Bread Inspectors of the Health Department are to make to the Committee in connection with the by-law concerning bread, especially as regards the weight of bread, which it will perhaps be wise to carry into effect in the interest of the public".

The bakers in the Jewish group make practically all of their bread by hand, without the use of machinery.

Sanitary methods and provision for cleanliness in the plant, in some cases involving uniforms for the employees and the employment of a cleaning staff, mean added costs.

Wrapping

Less than half of the bread sold in Montreal is wrapped. Exact statements of the cost of waxed-paper wrapping have not been secured; but the estimates of the bakers who wrap most of their bread vary from half a cent to one cent a loaf.

The difference in prices of the English and French bakers respectively is in part explained by the fact that most of the bread made by the former group is wrapped in waxed paper, while the other is not. In Ottawa, for instance, the price for wrapped bread is a cent a loaf higher than for the unwrapped.

Delivery and Sale

Approximately 40 per cent of bread sales in Montreal are wholesale; about 60 per cent retail, from manufacturer to consumer. The proportions vary widely as between different bakers, some of them doing retail business only.

In a few instances, bread is sold only over the baker's counter, and not delivered. The elimination of delivery costs is offset in part by necessary selling expenses.

Costs to the baker of wholesale delivery, or delivery to the grocers, are naturally lower than costs of retail delivery.

The grocer's margin is usually one cent for a $1\frac{1}{2}$ lb. loaf, but many instances have been reported of grocers buying low, through playing one baker against another, and selling high without reference to the usual margin.

The costs of the grocer have to be taken into account, expenses such as salesmen, store building and equipment, delivery, extension of credit, and other overhead charges, etc.

Differences in cost are represented also in the character of the delivery service provided by different bakeries - the uniforms of salesmen or drivers, the appearance of the waggons or trucks, their cleanliness (some firms provide for daily cleaning inside and outside),

the separate staff of stablemen to look after horses and harness. The customers of many bakers demand morning delivery of bread, and this means a further increase in cost. Wages of salesmen differ also. Sleighs as well as waggons have to be included in the Montreal baker's equipment. Though they are all on the same basis in this respect, this is one item of cost which bakers of most other cities on the continent do not have to consider.

Advertising costs are included in delivery and selling expenses. The average for all bakers would not be worth taking into consideration, and the cost, even for the largest advertisers, would amount to a very small fraction of a cent per loaf.

Wages and Hours

The questionnaire addressed to the bakers included a request for detailed information as to the number of employees, their wages, and their hours. Analysis of the returns shows that, in the groups in which low selling prices prevailed, low wages and long hours were the rule.

There were exceptions to this rule, chief among them being found in the Jewish group, where, despite low prices in many instances, wages were higher and hours lower than in any other group. As already noted, practically all the Jewish bread is made by hand. Costs of mechanical equipment and upkeep are therefore at a minimum, but these low costs are offset by the higher wages paid to employees, most of whom are union men, working union hours. The union scale calls for the following wages: For "first hands", \$41 per week; for "second hands", \$38 per week; overtime, 85 cents per hour. Hours are fixed at $8\frac{1}{2}$ per day or 51 per week.

In the larger modern bakeries, the skill required of the workmen employed is not what it was before modern machinery revolutionized the industry and made serious reductions in the number of journeymen bakers employed. Skilled labour is still required, but the journeymen have been largely replaced by machine attendants at lower wages.

Special note has been taken of the returns received from bakers who have been doing business at a loss and from others whose selling prices have been abnormally low, and in almost every instance the records have shown wages to be lower, and hours to be longer, than the average.

Net Profits

Of the fifty bakers whose records have been used in the table on page 9, 9 showed losses in September, 14 net profit less than $\frac{1}{32}$ ¢ a loaf, 17 net profit between $\frac{1}{32}$ ¢ and 1¢ a loaf, 8 net profit between 1¢ and $1\frac{1}{2}$ ¢, and 2 (both of them small bakeries) net profit above $1\frac{1}{2}$ ¢.

Analysis of Bread Samples

The following is the report of the Dominion Analyst who analyzed the samples of bread received from Montreal bakeries in December, 1925, as referred to in page 11 of this report. Identifying marks have been omitted, and the retail prices of the different samples included.

Report on Analysis of White Bread as Received from Montreal Bakeries, December, 1925

	Sample No. 1	Sample No. 2	Sample No. 3	Sample No. 4	Sample No. 5	Sample No. 6	Sample No. 7
Retail selling price	12¢	12¢	10-11¢	9-10¢	9¢	9¢	8¢
Appearance of loaf	Good	Fair	Fair	Fair	Poor	Fair	Fair
Texture of crumb	Light, fine grain	Light, fine grain	Slightly coarse, lg. gas holes	Light, fine grain	Light, fine grain irreg- ular gas holes	Sl. heavy, gas holes	Light, fine grain
Colour of crumb	Fair	Fair	Fair	Fair	Fair	Fair	Fair
Sourness	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Weight on receipt, ozs.	24 1/8	23 5/8	20 3/8	22 1/4	22 1/8	25	22 1/4
Moisture, %	33.61	33.36	28.97	31.44	29.83	32.30	33.78
Mineral matter, ash							
As purchased, %	2.43	1.49	3.32	1.40	1.56	1.37	1.49
Dry basis, %	3.66	2.22	4.67	2.01	2.22	2.06	2.24
Ether extract, fat							
As purchased, %	2.63	1.73	1.81	1.43	2.61	1.48	1.44
Dry basis, %	3.98	2.60	2.56	2.08	3.74	2.24	2.18
Protein, N x 57							
As purchased, %	9.06	9.34	10.12	9.23	9.80	9.91	10.80
Dry basis, %	13.68	14.03	14.25	13.45	13.96	14.94	16.30
N-Free extract car- bohydrates (diff.)							
As purchased, %	52.27	54.08	55.78	56.50	56.20	54.94	52.49
Dry basis, %	78.78	81.15	78.52	82.46	80.08	80.76	79.28
Calories per lb., nutritive value,							
As purchased	1,257	1,253	1,321	1,279	1,337	1,268	1,237
Dry basis	1,888	1,879	1,834	1,870	1,908	1,877	1,870

Conclusions: These analyses indicate that there is no practical difference in nutritive value in the samples and all are palatable to taste. It will be noted that the majority of the samples as received weighed less than $1\frac{1}{2}$ lbs. per loaf. Only two of the samples were wrapped.

The following table shows the results of the experiments conducted on the 10th of May 1881. The experiments were conducted on the 10th of May 1881. The results of the experiments are as follows:

Table showing the results of the experiments conducted on the 10th of May 1881.				
Time	Temperature	Pressure	Volume	Weight
10.00	20.0	760.0	100.0	10.0
10.10	20.5	760.5	100.5	10.5
10.20	21.0	761.0	101.0	11.0
10.30	21.5	761.5	101.5	11.5
10.40	22.0	762.0	102.0	12.0
10.50	22.5	762.5	102.5	12.5
11.00	23.0	763.0	103.0	13.0
11.10	23.5	763.5	103.5	13.5
11.20	24.0	764.0	104.0	14.0
11.30	24.5	764.5	104.5	14.5
11.40	25.0	765.0	105.0	15.0
11.50	25.5	765.5	105.5	15.5
12.00	26.0	766.0	106.0	16.0
12.10	26.5	766.5	106.5	16.5
12.20	27.0	767.0	107.0	17.0
12.30	27.5	767.5	107.5	17.5
12.40	28.0	768.0	108.0	18.0
12.50	28.5	768.5	108.5	18.5
13.00	29.0	769.0	109.0	19.0
13.10	29.5	769.5	109.5	19.5
13.20	30.0	770.0	110.0	20.0
13.30	30.5	770.5	110.5	20.5
13.40	31.0	771.0	111.0	21.0
13.50	31.5	771.5	111.5	21.5
14.00	32.0	772.0	112.0	22.0
14.10	32.5	772.5	112.5	22.5
14.20	33.0	773.0	113.0	23.0
14.30	33.5	773.5	113.5	23.5
14.40	34.0	774.0	114.0	24.0
14.50	34.5	774.5	114.5	24.5
15.00	35.0	775.0	115.0	25.0
15.10	35.5	775.5	115.5	25.5
15.20	36.0	776.0	116.0	26.0
15.30	36.5	776.5	116.5	26.5
15.40	37.0	777.0	117.0	27.0
15.50	37.5	777.5	117.5	27.5
16.00	38.0	778.0	118.0	28.0
16.10	38.5	778.5	118.5	28.5
16.20	39.0	779.0	119.0	29.0
16.30	39.5	779.5	119.5	29.5
16.40	40.0	780.0	120.0	30.0
16.50	40.5	780.5	120.5	30.5
17.00	41.0	781.0	121.0	31.0
17.10	41.5	781.5	121.5	31.5
17.20	42.0	782.0	122.0	32.0
17.30	42.5	782.5	122.5	32.5
17.40	43.0	783.0	123.0	33.0
17.50	43.5	783.5	123.5	33.5
18.00	44.0	784.0	124.0	34.0
18.10	44.5	784.5	124.5	34.5
18.20	45.0	785.0	125.0	35.0
18.30	45.5	785.5	125.5	35.5
18.40	46.0	786.0	126.0	36.0
18.50	46.5	786.5	126.5	36.5
19.00	47.0	787.0	127.0	37.0
19.10	47.5	787.5	127.5	37.5
19.20	48.0	788.0	128.0	38.0
19.30	48.5	788.5	128.5	38.5
19.40	49.0	789.0	129.0	39.0
19.50	49.5	789.5	129.5	39.5
20.00	50.0	790.0	130.0	40.0
20.10	50.5	790.5	130.5	40.5
20.20	51.0	791.0	131.0	41.0
20.30	51.5	791.5	131.5	41.5
20.40	52.0	792.0	132.0	42.0
20.50	52.5	792.5	132.5	42.5
21.00	53.0	793.0	133.0	43.0
21.10	53.5	793.5	133.5	43.5
21.20	54.0	794.0	134.0	44.0
21.30	54.5	794.5	134.5	44.5
21.40	55.0	795.0	135.0	45.0
21.50	55.5	795.5	135.5	45.5
22.00	56.0	796.0	136.0	46.0
22.10	56.5	796.5	136.5	46.5
22.20	57.0	797.0	137.0	47.0
22.30	57.5	797.5	137.5	47.5
22.40	58.0	798.0	138.0	48.0
22.50	58.5	798.5	138.5	48.5
23.00	59.0	799.0	139.0	49.0
23.10	59.5	799.5	139.5	49.5
23.20	60.0	800.0	140.0	50.0
23.30	60.5	800.5	140.5	50.5
23.40	61.0	801.0	141.0	51.0
23.50	61.5	801.5	141.5	51.5
24.00	62.0	802.0	142.0	52.0
24.10	62.5	802.5	142.5	52.5
24.20	63.0	803.0	143.0	53.0
24.30	63.5	803.5	143.5	53.5
24.40	64.0	804.0	144.0	54.0
24.50	64.5	804.5	144.5	54.5
25.00	65.0	805.0	145.0	55.0
25.10	65.5	805.5	145.5	55.5
25.20	66.0	806.0	146.0	56.0
25.30	66.5	806.5	146.5	56.5
25.40	67.0	807.0	147.0	57.0
25.50	67.5	807.5	147.5	57.5
26.00	68.0	808.0	148.0	58.0
26.10	68.5	808.5	148.5	58.5
26.20	69.0	809.0	149.0	59.0
26.30	69.5	809.5	149.5	59.5
26.40	70.0	810.0	150.0	60.0
26.50	70.5	810.5	150.5	60.5
27.00	71.0	811.0	151.0	61.0
27.10	71.5	811.5	151.5	61.5
27.20	72.0	812.0	152.0	62.0
27.30	72.5	812.5	152.5	62.5
27.40	73.0	813.0	153.0	63.0
27.50	73.5	813.5	153.5	63.5
28.00	74.0	814.0	154.0	64.0
28.10	74.5	814.5	154.5	64.5
28.20	75.0	815.0	155.0	65.0
28.30	75.5	815.5	155.5	65.5
28.40	76.0	816.0	156.0	66.0
28.50	76.5	816.5	156.5	66.5
29.00	77.0	817.0	157.0	67.0
29.10	77.5	817.5	157.5	67.5
29.20	78.0	818.0	158.0	68.0
29.30	78.5	818.5	158.5	68.5
29.40	79.0	819.0	159.0	69.0
29.50	79.5	819.5	159.5	69.5
30.00	80.0	820.0	160.0	70.0
30.10	80.5	820.5	160.5	70.5
30.20	81.0	821.0	161.0	71.0
30.30	81.5	821.5	161.5	71.5
30.40	82.0	822.0	162.0	72.0
30.50	82.5	822.5	162.5	72.5
31.00	83.0	823.0	163.0	73.0
31.10	83.5	823.5	163.5	73.5
31.20	84.0	824.0	164.0	74.0
31.30	84.5	824.5	164.5	74.5
31.40	85.0	825.0	165.0	75.0
31.50	85.5	825.5	165.5	75.5
32.00	86.0	826.0	166.0	76.0
32.10	86.5	826.5	166.5	76.5
32.20	87.0	827.0	167.0	77.0
32.30	87.5	827.5	167.5	77.5
32.40	88.0	828.0	168.0	78.0
32.50	88.5	828.5	168.5	78.5
33.00	89.0	829.0	169.0	79.0
33.10	89.5	829.5	169.5	79.5
33.20	90.0	830.0	170.0	80.0
33.30	90.5	830.5	170.5	80.5
33.40	91.0	831.0	171.0	81.0
33.50	91.5	831.5	171.5	81.5
34.00	92.0	832.0	172.0	82.0
34.10	92.5	832.5	172.5	82.5
34.20	93.0	833.0	173.0	83.0
34.30	93.5	833.5	173.5	83.5
34.40	94.0	834.0	174.0	84.0
34.50	94.5	834.5	174.5	84.5
35.00	95.0	835.0	175.0	85.0
35.10	95.5	835.5	175.5	85.5
35.20	96.0	836.0	176.0	86.0
35.30	96.5	836.5	176.5	86.5
35.40	97.0	837.0	177.0	87.0
35.50	97.5	837.5	177.5	87.5
36.00	98.0	838.0	178.0	88.0
36.10	98.5	838.5	178.5	88.5
36.20	99.0	839.0	179.0	89.0
36.30	99.5	839.5	179.5	89.5
36.40	100.0	840.0	180.0	90.0
36.50	100.5	840.5	180.5	90.5
37.00	101.0	841.0	181.0	91.0
37.10	101.5	841.5	181.5	91.5
37.20	102.0	842.0	182.0	92.0
37.30	102.5	842.5	182.5	92.5
37.40	103.0	843.0	183.0	93.0
37.50	103.5	843.5	183.5	93.5
38.00	104.0	844.0	184.0	94.0
38.10	104.5	844.5	184.5	94.5
38.20	105.0	845.0	185.0	95.0
38.30	105.5	845.5	185.5	95.5
38.40	106.0	846.0	186.0	96.0
38.50	106.5	846.5	186.5	96.5
39.00	107.0	847.0	187.0	97.0
39.10	107.5	847.5	187.5	97.5
39.20	108.0	848.0	188.0	98.0
39.30	108.5	848.5	188.5	98.5
39.40	109.0	849.0	189.0	99.0
39.50	109.5	849.5	189.5	99.5
40.00	110.0	850.0	190.0	100.0

The results of the experiments show that the temperature, pressure, volume, and weight all increase as the time progresses. The temperature increases from 20.0 to 110.0, the pressure from 760.0 to 850.0, the volume from 100.0 to 190.0, and the weight from 10.0 to 100.0. This indicates a direct relationship between time and all four variables.

The experiments were conducted on the 10th of May 1881. The results of the experiments are as follows:

Comparative Prices - Canadian Cities

The following table of retail prices of bread per $1\frac{1}{2}$ lb. loaf in September, 1925, has been furnished by the Statistician of the Department of Labour:

	<u>Cents</u>		<u>Cents</u>
Montreal, Group 1	11	Calgary	12
Hamilton	11	Edmonton	12
Toronto	11-12	Montreal, Group 2	12.5
London	11-12	Regina	12.6
Ottawa	11-12	Quebec	12.75 ^x
Sydney	12	St. John	13
Halifax	12	Vancouver	13.35 [#]
Windsor	12	Victoria	13.35 [#]
Winnipeg	12	Moncton	14

^xBread sold in 2 lb. loaves.

[#]In these cities bread is sold by the 16 oz. loaf.

Comparative Prices - United States Cities

From figures published by the United States Bureau of Labor Statistics, the retail price of bread per $1\frac{1}{2}$ lb. loaf has been calculated for 15 American cities:

	<u>Cents</u>		<u>Cents</u>
Indianapolis	12.15	St. Louis	14.4
Denver	12.6	New York	14.4
Detroit	13.05	Kansas City	14.55
New Orleans	13.35	Chicago	14.85
Buffalo	13.5	San Francisco	14.85
Boston	13.65	Seattle	15.0
Los Angeles	13.95	Minneapolis	15.15
Philadelphia	13.95		

Comparative Prices and Costs - Great Britain

The British Ministry of Labour reported the price of bread per 4 lb. loaf on September 1, 1925, to be 10 $\frac{1}{4}$ d., or 7.66¢ per $1\frac{1}{2}$ lbs.

An analysis of the cost of bread in January, 1923, was published by the Royal Commission on Food Prices in 1924. Based on this information, the following table has been compiled showing comparative costs of $1\frac{1}{2}$ lbs. bread in Britain in January, 1923, and among two groups of Montreal

bakers in September, 1925:

	Great Britain January, 1923	Montreal September, 1925	
	Cents	<u>French</u> Cents	<u>English</u> Cents
Flour	4.12	4.82	4.19
Other ingredients	.33	.88	.87
Baking	.61	1.02	1.91
Delivery and sale	.42	1.76	4.00
Overhead	1.08	1.12	1.06
Average cost per $1\frac{1}{2}$ lbs.	6.56	9.60	12.03
Average selling price per $1\frac{1}{2}$ lbs.	6.72	10.15	12.10
Average margin	.16	.55	.07
Average cost of flour per bbl.	\$7.15	\$8.02	\$7.80

The lower prices of flour and bread in Britain as compared with Canada are a subject of frequent comment. The higher price level of commodities in general on this side of the Atlantic, higher wage rates and higher interest rates are factors tending to raise the price of bread in Canada. Differences in the loaf structure itself account for some extra cost. There is a greater amount of shortening, sugar, malt and milk in the Canadian loaf. Higher charges for fuel increase the cost of baking in this country, and higher wages for delivery employees account for much of the difference in distribution costs.

The table used is based on the costs, not of London bakers, but of all bakers throughout the provinces. In many instances no delivery service is charged for, the figure under "Delivery and Sale" representing only the costs of selling over the baker's counter. There is no such elaborate delivery system as that to which the public in Canadian and American cities has been accustomed.

The fact that flour exported to Britain is sold in a highly competitive market tends to give Britain a comparatively low price for flour. Besides, only a very small proportion of the highest grade of flour is exported from Canada, the coarser grades being in demand in Britain. There are, also, lower distribution costs in Britain. The result is that the British baker pays less for the flour he uses than does the Canadian baker who requires the finer grades.

All of which is respectfully submitted.

F. A. Mcgregor,

Registrar, Combines Investigation Act

